STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 120149

TO: Elli Peselev Location: REM/5D51/5C18 Art Unit: 1623 Monday, April 26, 2004 Case Serial Number: 09/816761	From: Barb O'Bryen Location: Biotech-Chem Library Remsen 1A69 Phone: 571-272-2518 barbara.obryen@uspto.gov

Search Notes

STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact ***the searcher or contact***:

Mary Hale, Information Branch Supervisor
Remsen Bldg. 01 D86
571-272-2507

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1610*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found**:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-Biotech-Chem Library, Remsen Bldg.

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=> fil reg; d stat que l24; fil capl uspatf biosis toxcenter; s l24
FILE 'REGISTRY' ENTERED AT 11:38:08 ON 26 APR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 APR 2004  HIGHEST RN 676578-75-9
DICTIONARY FILE UPDATES:  23 APR 2004  HIGHEST RN 676578-75-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html


L6         28751 SEA FILE=HCAPLUS ABB=ON  DRUG INTERACTIONS/CT
L7         40930 SEA FILE=HCAPLUS ABB=ON  DRUG RESISTANCE+NT/CT
L8         67970 SEA FILE=HCAPLUS ABB=ON  L6 OR L7
L10       219307 SEA FILE=HCAPLUS ABB=ON  ANTIMICROBIAL AGENTS+NT/CT
L11       152121 SEA FILE=HCAPLUS ABB=ON  ANTIBIOTICS+NT/CT
L12        21234 SEA FILE=HCAPLUS ABB=ON  L8 AND (L10 OR L11)
L13              SEL  L12 1- RN :   50660 TERMS  (TERM LIMIT EXCEEDED)
L14        50660 SEA FILE=REGISTRY ABB=ON  L13
L15              SEL  L12 4575- RN :   50073 TERMS  (TERM LIMIT EXCEEDED)
L16        50073 SEA FILE=REGISTRY ABB=ON  L15
L17              SEL  L12 13672- RN :    8941 TERMS
L18         8942 SEA FILE=REGISTRY ABB=ON  L17
L19        97285 SEA FILE=REGISTRY ABB=ON  L14 OR L16 OR L18
L20              STR
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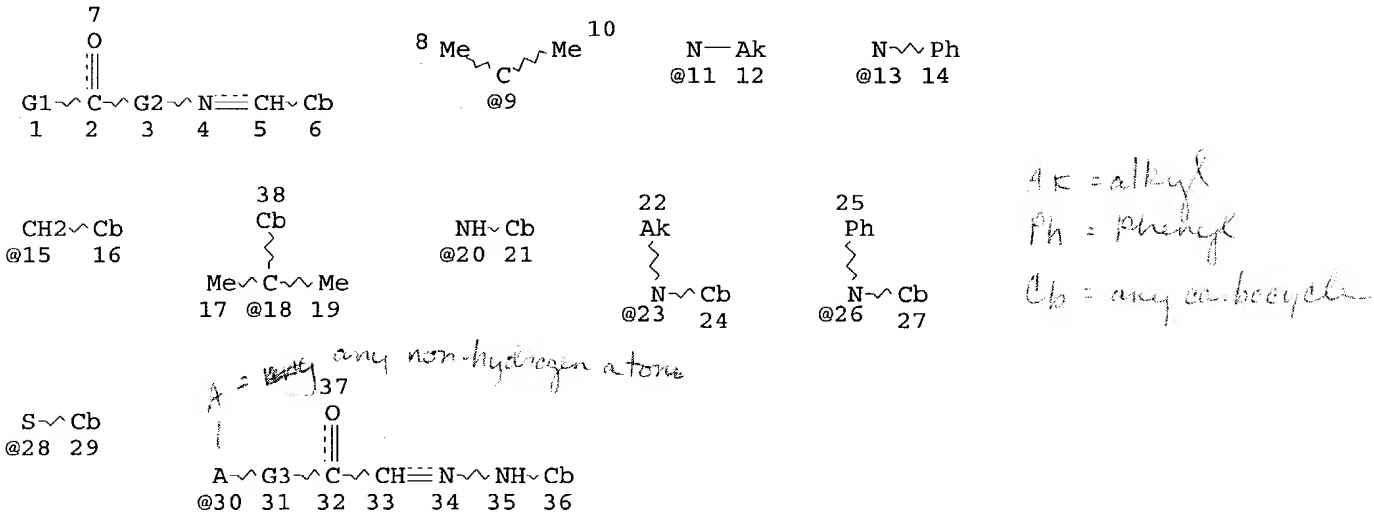

Ak = alkyl
Ph = phenyl
Cb = any carbocycle
A = any non-hydrogen atom

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REP G3=(0-7) A
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NODE ATTRIBUTES:
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CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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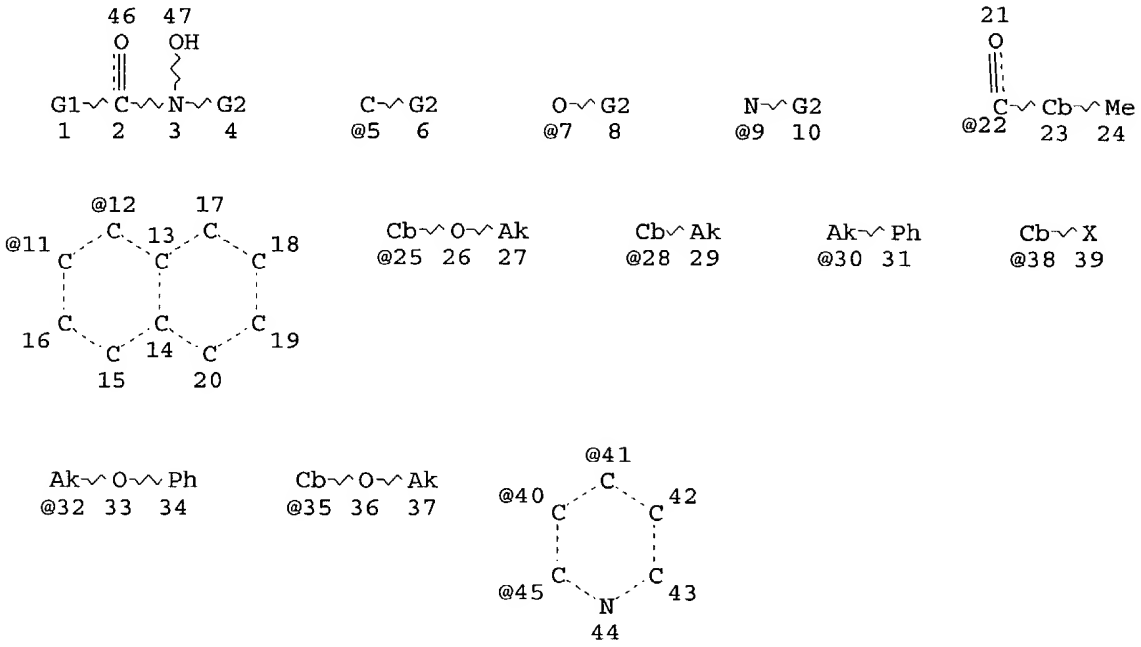
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 38

STEREO ATTRIBUTES: NONE
L22 STR



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CONNECT IS E1 RC AT 37
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 47

STEREO ATTRIBUTES: NONE
L24 8 SEA FILE=REGISTRY SUB=L19 SSS FUL (L20 OR L22)

100.0% PROCESSED 8285 ITERATIONS 8 ANSWERS
SEARCH TIME: 00.00.02

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE 'USPATFULL' ENTERED AT 11:38:08 ON 26 APR 2004

FILE 'BIOSIS' ENTERED AT 11:38:08 ON 26 APR 2004

FILE 'TOXCENTER' ENTERED AT 11:38:08 ON 26 APR 2004

L26 23 L24

=> dup rem l26
PROCESSING COMPLETED FOR L26
L27 17 DUP REM L26 (6 DUPLICATES REMOVED)
ANSWERS '1-13' FROM FILE CAPLUS
ANSWERS '14-16' FROM FILE USPATFULL
ANSWER '17' FROM FILE BIOSIS

=> d ibib ed abs hitstr 1-16; d iall 17

L27 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:23438 CAPLUS
DOCUMENT NUMBER: 138:68713
TITLE: Modulating resistance of tumor and pathogen cells to foreign compounds by manipulation of ATP gradients via regulation of ABC transporters and ecto-phosphatases
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.
PATENT ASSIGNEE(S): University of Texas, USA
SOURCE: U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U.S. Ser. No. 261,825.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003008369	A1	20030109	US 2002-134019	20020425
US 2002006901	A1	20020117	US 1999-244792	19990205
WO 2003091403	A2	20031106	WO 2003-US12780	20030425

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-244792 A2 19990205
US 1999-261825 A2 19990303
US 2002-134019 A1 20020425

ED Entered STN: 10 Jan 2003
AB The present invention relates to methods for modulating the growth of tumor and pathogen cells and the resistance of cells to foreign compds., i.e. drugs, antibiotics, etc. by altering the ATP gradient across biol.

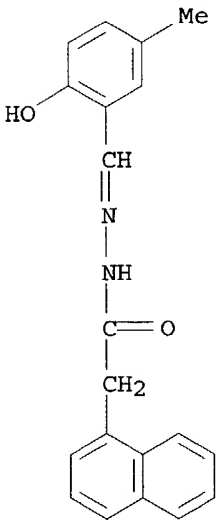
membranes. The altering of the ATP gradient across biol. membranes is achieved through the manipulation of ecto-phosphatase (e.g., human apyrase) activity and ABC transporter mol. (e.g., Arabidopsis AtPGP-1) activity which may also be useful to confer herbicide resistance to plants, confer antibiotic resistance to bacteria, confer drug resistance to yeast cells, or to reduce resistance in cells to facilitate chemotherapeutic treatments, and to reduce resistance in bacteria and yeast. The present invention is also directed to the methods for identifying ecto-phosphatase inhibitors and uses thereof. Nineteen ecto-phosphatase inhibitory mols. are provided which are useful in reversing multi-drug resistance in Arabidopsis and yeast.

IT **291536-82-8 291536-84-0**

RL: AGR (Agricultural use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modulating resistance of tumor and pathogen cells to foreign compds. by manipulation of ATP gradients via regulation of ABC transporters and ecto-phosphatases)

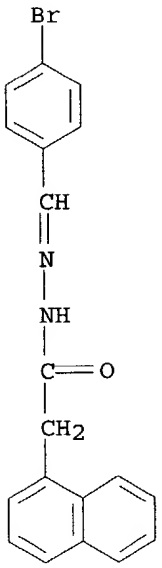
RN 291536-82-8 CAPLUS

CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 CAPLUS

CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)

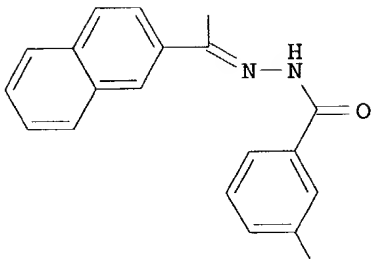


L27 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:185280 CAPLUS
DOCUMENT NUMBER: 136:244034
TITLE: Method for increasing the effectiveness of antiinfective agents by inhibiting ecto-phosphatase and/or ABC transporter activities
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.
PATENT ASSIGNEE(S): Board of Regents, the University of Texas System, USA
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020726	A2	20020314	WO 2001-US28242	20010907
WO 2002020726	A3	20020606		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001090710	A5	20020322	AU 2001-90710	20010907
US 2002077365	A1	20020620	US 2001-949268	20010907

PRIORITY APPLN. INFO.: US 2000-231088P P 20000908
WO 2001-US28242 W 20010907

ED Entered STN: 15 Mar 2002
GI



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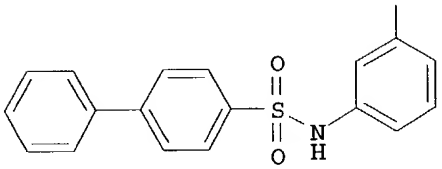


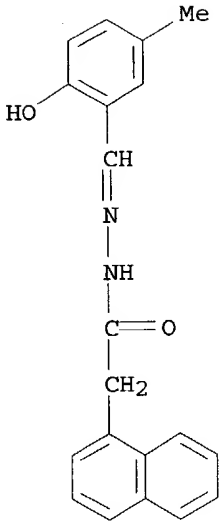
II

AB The present invention relates to methods for decreasing the resistance of microbial strains to antiinfectives such an antibiotics and antifungals by altering the ATP gradient across biol. membranes. The altering of the ATP gradient across biol. membranes is achieved through the inhibition of ecto-phosphatase activity and/or ABC transporter mol. activity which may be useful to reduce resistance in bacteria and yeast to aid in the treatment of certain infections and disease and to lower the concn. of antiinfectives necessary to inhibit the growth of microbial strains. Apyrase inhibitor I increased the growth inhibitory effect of the fungicide chlorothalonil by over 50%. Surflan was an equally effective weed killer against Arabidopsis thaliana at a five-fold less concn. in the presence of II.

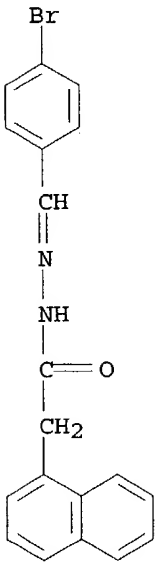
IT **291536-82-8 291536-84-0**
RL: BSU (Biological study, unclassified); CST (Combinatorial study, unclassified); BIOL (Biological study); CMBI (Combinatorial study)
(as apyrase inhibitor; method for increasing effectiveness of antiinfective agents by inhibiting ecto-phosphatase and/or ABC transporter activities)

RN 291536-82-8 CAPLUS

CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2002:833490 CAPLUS
DOCUMENT NUMBER: 137:306061
TITLE: Pesticidal and herbicidal activity through modulation of animal and plant cell membrane transport
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.
PATENT ASSIGNEE(S): Board of Regents, The University of Texas System, USA
SOURCE: U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U. S. Ser. No. 244,791.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002160915	A1	20021031	US 2001-793336	20010226
US 6448472	B1	20020910	US 1999-244791	19990205

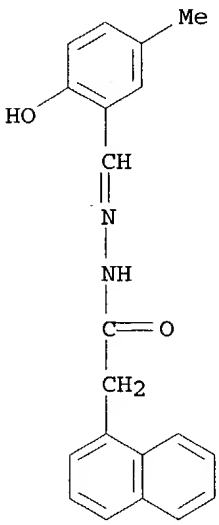
PRIORITY APPLN. INFO.: US 1999-244791 A2 19990205
US 2000-185299P P 20000228

ED Entered STN: 01 Nov 2002

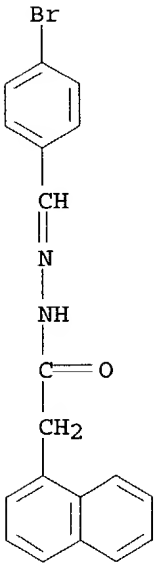
AB The present invention relates to the modulation of pesticidal and herbicidal activity by treatment of a membrane transport system in a cell. This entails modifying the extra-cellular phosphatases found in the membranes of these cells. By modifying the ATP gradient across the biol. membrane of a target plant, bacteria, insect or mammalian cell via inhibiting one or more extra-cellular phosphatases, it is possible to alter the sensitivity to a pesticide or herbicide. The method also comprises inhibiting an ABC transporter in the target cell. The method can also be used for identifying chems. with pesticidal activity.

IT **291536-82-8 291536-84-0**
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ectophosphatase inhibitor which enhances pesticidal and herbicidal activity by altering the ATP gradient across biol. membranes)

RN 291536-82-8 CAPLUS
CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2001:713127 CAPLUS
DOCUMENT NUMBER: 135:251941
TITLE: Bactericidal antimicrobial methods and compositions using acyl hydrazides, oxyamides, and 8-hydroxyquinolines as antibiotic potentiators for treatment of Gram-positive infections
INVENTOR(S): Markham, Penelope N.; Klyachko, Ekaterina A.; Crich, David; Jaber, Mohamad-Rami; Johnson, Michael E.; Mulhearn, Debbie C.; Neyfakh, Alexander A.
PATENT ASSIGNEE(S): Influx, Inc., USA
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070213	A2	20010927	WO 2001-US9578	20010323
WO 2001070213	A3	20030109		
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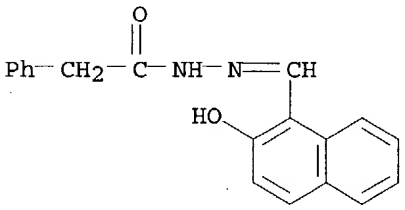
EP 1296688	A2	20030402	EP 2001-930428	20010323
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003527417	T2	20030916	JP 2001-568411	20010323
US 2003225126	A1	20031204	US 2001-816761	20010323

PRIORITY APPLN. INFO.: US 2000-191879P P 20000323
WO 2001-US9578 W 20010323

OTHER SOURCE(S): MARPAT 135:251941
ED Entered STN: 28 Sep 2001
AB The invention provides methods and compns. for increasing the effectiveness of existing antibacterial agents and methods of overcoming bacterial resistance. Specifically, the invention provides methods of enhancing the action of an antibacterial agent by use of an antibiotic potentiator. Compns. of antibiotic potentiators including an acyl hydrazide, an oxyamide, and an 8-hydroxy quinoline, also are disclosed.
IT **34334-88-8 34334-88-8D**, N-alkyl derivs.
118675-88-0 362512-05-8 362512-06-9
362512-07-0 362512-10-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bactericidal antimicrobial methods and compns. using acyl hydrazides, oxyamides, and 8-hydroxyquinolines as antibiotic potentiators for treatment of Gram-pos. infections)
RN 34334-88-8 CAPLUS
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 34334-88-8 CAPLUS
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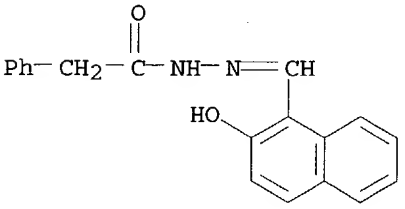

RN 118675-88-0 CAPLUS
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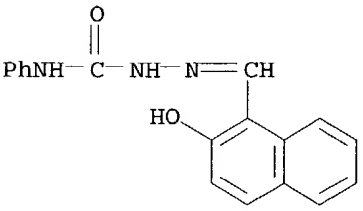

RN 362512-05-8 CAPLUS
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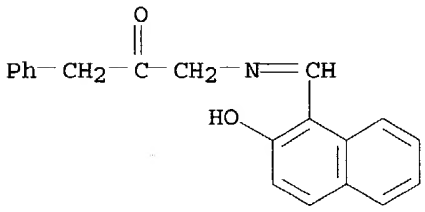

RN 362512-06-9 CAPLUS
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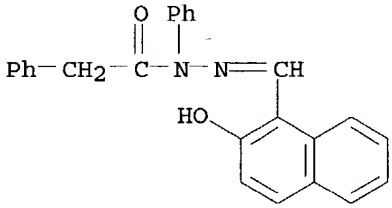
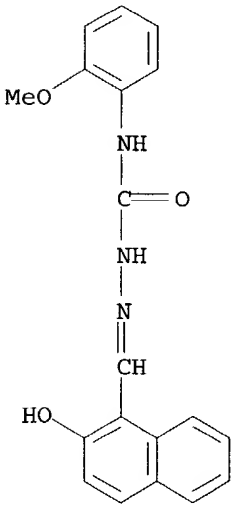
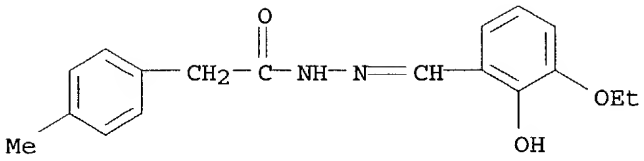


RN 362512-07-0 CAPLUS
CN Hydrazinecarboxamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]-N-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



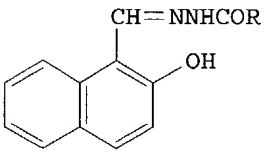
RN 362512-10-5 CAPLUS
CN Benzeneacetic acid, 4-methyl-, [(3-ethoxy-2-hydroxyphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1981:550271 CAPLUS
DOCUMENT NUMBER: 95:150271
TITLE: Certain 2-hydroxy-1-naphthaldehyde acylhydrazones and their use as fungicides
INVENTOR(S): Rusay, Ronald J.
PATENT ASSIGNEE(S): Stauffer Chemical Co. , USA
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4277500	A	19810707	US 1980-132957	19800324

PRIORITY APPLN. INFO.: US 1980-132957 19800324
ED Entered STN: 12 May 1984
GI

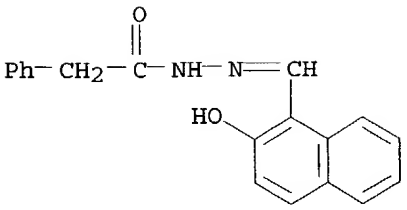


I

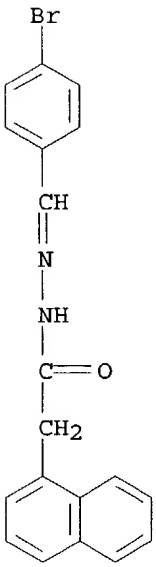
AB Hydrazones I (R = C1-4 alkyl, Ph. halophenyl, PhCH2 HOC6H4) were prepd. Thus, 2-hydroxy-1-naphthaldehyde was refluxed with salicyl hydrazide in PhMe to give 58% I (R = o-HOC6H4), which showed fungicidal activity against bean rust and tomato early blight.

IT **34334-88-8P**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and fungicidal activity of)

RN 34334-88-8 CAPLUS
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:870013 CAPLUS
DOCUMENT NUMBER: 138:200817
TITLE: Automated colorimetric screen for apyrase inhibitors
AUTHOR(S): Windsor, J. B.; Thomas, C.; Hurley, L.; Roux, S. J.; Lloyd, A. M.
CORPORATE SOURCE: The University of Texas at Austin, Austin, TX, USA
SOURCE: BioTechniques (2002), 33(5), 1024,1026,1028-1030
CODEN: BTNQDO; ISSN: 0736-6205
PUBLISHER: Eaton Publishing Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 17 Nov 2002
AB Apyrases are enzymes that efficiently hydrolyze ATP and ADP and may operate both inside and outside the cell. Although apyrases are important to a variety of cellular mechanisms and uses in industry, there are no available apyrase-specific inhibitors. Colorimetric assays based on the Fiske-Subbarow method for measuring inorg. phosphate are able to detect the release of inorg. phosphate from ATP and other nucleotides. We found that this type of assay could be automated and used to screen for apyrase-inhibiting compds. by assaying for a redn. in released phosphate in the presence of potential inhibitors. The automation of this assay allowed for the successful screening of a com. available compd. library. Several low mol. wt. compds. were identified that, when used at micromolar concns., effectively inhibited apyrase activity.
IT **291536-84-0**, NGXT 195
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(automated colorimetric assays based on the Fiske-Subbarow method for screening for apyrase inhibitors)
RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:676991 CAPLUS
DOCUMENT NUMBER: 135:222868
TITLE: Pesticide adjuvant activity through modulation of animal and plant cell membrane transport
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.
PATENT ASSIGNEE(S): The University of Texas System, Board of Regents, USA
SOURCE: PCT Int. Appl., 76 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066792	A1	20010913	WO 2001-US7423	20010307
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002103082	A1	20020801	US 2001-800327	20010306

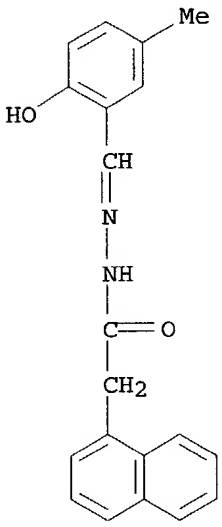
PRIORITY APPLN. INFO.: US 2000-187819P P 20000308
US 2001-800327 A 20010306

ED Entered STN: 14 Sep 2001
AB The invention relates to the modulation of pesticidal and herbicidal activity by treatment of a membrane transport system in a cell. This entails modifying the extracellular phosphatases found in the membranes of these cells. By modifying the ATP gradient across the biol. membrane of a target plant, bacteria, insect or mammalian cell via inhibiting one or more extracellular phosphatases, it is possible to alter the sensitivity

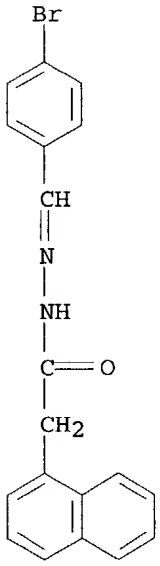
to a pesticide or herbicide. In preferred embodiments, the chem. moieties of the invention act as adjuvants to enhance pesticidal activity.

IT **291536-82-8 291536-84-0**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(pesticide adjuvant acting by inhibition of extracellular phosphatases in membranes)

RN 291536-82-8 CAPLUS
CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



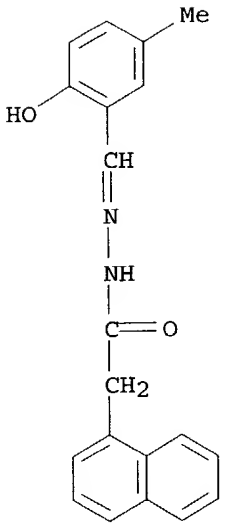
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:661570 CAPLUS
DOCUMENT NUMBER: 135:206922
TITLE: Pesticidal and herbicidal activity through modulation of animal and plant cell membrane transport
INVENTOR(S): Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.
PATENT ASSIGNEE(S): Board of Regents, the University of Texas System, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

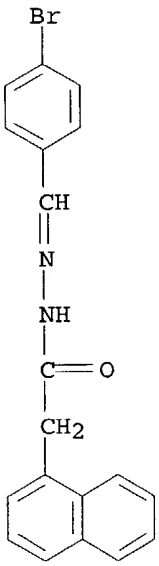
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001064859	A1	20010907	WO 2001-US6503	20010227

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-185299P P 20000228
ED Entered STN: 10 Sep 2001
AB The invention relates to the modulation of pesticidal and herbicidal activity by treatment of a membrane transport system in a cell. This entails modifying the extra-cellular phosphatases found in the membranes of these cells. By modifying the ATP gradient across the biol. membrane of a target plant, bacteria, insect or mammalian cell via inhibiting one or more extracellular phosphatases, it is possible to alter the sensitivity to a pesticide or herbicide. The method also comprises inhibiting an ABC transporter in the target cell. The method can also be used for identifying chems. with pesticidal activity.
IT **291536-82-8 291536-84-0**
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ectophosphatase inhibitor which enhances pesticidal and herbicidal activity by altering the ATP gradient across biol. membranes)
RN 291536-82-8 CAPLUS
CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:628251 CAPLUS
DOCUMENT NUMBER: 133:219782
TITLE: Genetic and epigenetic manipulation of ABC transporters and ecto-phosphatases for modulating drug resistance and methods for detection of ecto-phosphatase inhibitors
INVENTOR(S): Thomas, Collin E.; Windsor, J. Brian; Roux, Stan J.; Lloyd, Alan M.; Hurley, Laurence
PATENT ASSIGNEE(S): University of Texas, USA

SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

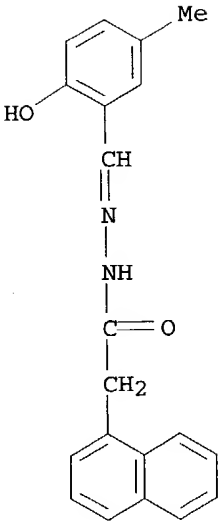
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052144	A1	20000908	WO 2000-US5315	20000228
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1185623	A1	20020313	EP 2000-913685	20000228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002173031	A1	20021121	US 2002-47251	20020114
PRIORITY APPLN. INFO.:			US 1999-261825 A	19990303
			WO 2000-US5315 W	20000228

ED Entered STN: 10 Sep 2000

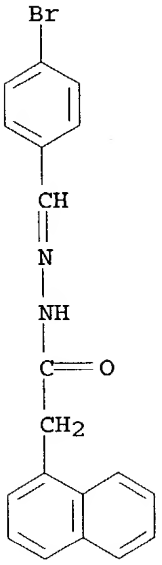
AB The present invention relates to methods for modulating the resistance of cells to foreign compds., i.e. drugs, antibiotics, etc. by altering the ATP gradient across biol. membranes. Altering the ATP gradient across biol. membranes is achieved through the manipulation of ecto-phosphatase activity and ABC transporter mol. activity. The above method may be useful to confer herbicide resistance to plants, antibiotic resistance to bacteria, and drug resistance to yeast cells, or to reduce resistance in cells,bacteria, and yeast in order to facilitate chemotherapeutic treatments. The present invention is also directed to the methods for identifying ecto-phosphatase inhibitors and uses thereof. Thus, Arabidopsis thaliana has been shown to possess an ecto-apyrase and this ecto-apyrase and PGP-1 (an MDR-like protein) to have a role in MDR. Addnl., the extracellular ATP pool was shown to be crit. for MDR in yeast. Screening of a combinatorial library of small mols. has resulted in identification of apyrase inhibitors.

IT **291536-82-8 291536-84-0**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(genetic and epigenetic manipulation of ABC transporters and ecto-phosphatases for modulating drug resistance and methods for detection of ecto-phosphatase inhibitors)

RN 291536-82-8 CAPLUS
CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



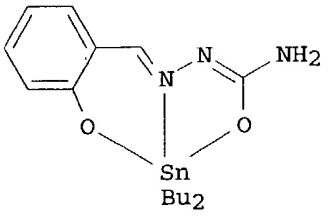
RN 291536-84-0 CAPLUS
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:81128 CAPLUS
DOCUMENT NUMBER: 124:261184
TITLE: Syntheses and characterization of pentacoordinate organo-tin(IV) complexes. II
AUTHOR(S): Wang, Ji-Tao; Zhang, Yun-Wen; Xu, Yu-Ming; Wang, Zhi-Wen
CORPORATE SOURCE: Department Chemistry, Nankai University, Tianjin, Peop. Rep. China
SOURCE: Heteroatom Chemistry (1995), 6(5), 443-7

CODEN: HETCE8; ISSN: 1042-7163
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 07 Feb 1996
GI

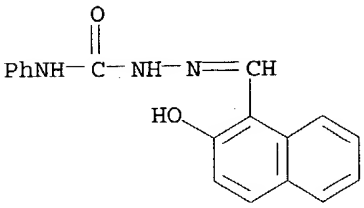


I

AB Nine substituted benzoylhydrazone, three semicarbazone, and four thiosemicarbazone tridentate ligands were synthesized. They were used to coordinate with Bu2SnCl2 or (PhCH2)2SnCl2 to form 18 novel Sn complexes, e.g., I, that contained pentacoordinate organotin(IV) in a heterobicyclic ring. All these complexes were characterized by MS, NMR, and IR spectroscopy elemental analyses.

IT **118675-88-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with dichlorostannanes)

RN 118675-88-0 CAPLUS
CN Hydrazinecarboxamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]-N-phenyl- (9CI) (CA INDEX NAME)



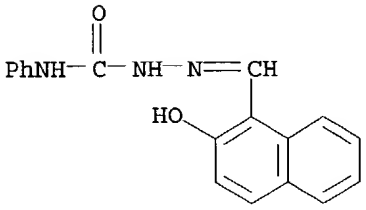
L27 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:87379 CAPLUS
DOCUMENT NUMBER: 110:87379
TITLE: Cobalt(II), nickel(II), and copper(II) complexes with 2-hydroxy-1-naphthalidene-4-phenyl semicarbazone
AUTHOR(S): Dwivedi, D. K.; Maurya, R. C.; Shukla, R. K.; Anandam, N.; Shukla, R.; Saxena, P. K.
CORPORATE SOURCE: Chem. Lab., Atarra Coll., Atarra, 210 201, India
SOURCE: Oriental Journal of Chemistry (1988), 4(3), 258-62
CODEN: OJCHEG; ISSN: 0970-020X
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 04 Mar 1989
AB [ML2(H2O)2] (HL = 2-hydroxy-1-naphthalidene-4-phenylsemicarbazone; M = Co, Cu) and [NiL2(H2O)2].2H2O were prepd. and characterized by anal., IR, reflectance, magnetic and thermal studies. The ligand, the prepn. of which is given, behaves as monobasic bidentate O, N-donor in these

octahedral complexes.

IT **118675-88-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 118675-88-0 CAPLUS

CN Hydrazinecarboxamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]-N-phenyl- (9CI) (CA INDEX NAME)



L27 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1974:485489 CAPLUS
DOCUMENT NUMBER: 81:85489
TITLE: Hydrazone derivatives in fluorometric analysis. III. Relations between the fluorescence development of hydrazone derivatives, the formation of its fluorescent metal complexes and their structures
AUTHOR(S): Taniguchi, Hirokazu; Tsuge, Keiko; Nakano, Saburo
CORPORATE SOURCE: Meiji Coll. Pharm., Tokyo, Japan
SOURCE: Yakugaku Zasshi (1974), 94(6), 759-65
CODEN: YKKZAJ; ISSN: 0031-6903
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

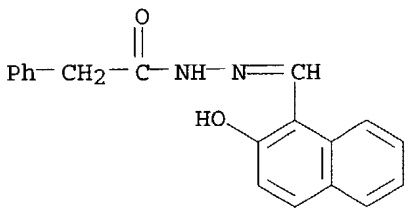
ED Entered STN: 12 May 1984

AB The relation between chem. structure and fluorescence characteristics of 37 hydrazones were studied; a hydroxyl group in ortho to the N: CH is necessary for strong fluorescence. Formation of a fluorescent complex of 2-hydroxy-1-naphthaldehyde hydrazones with metal ions was examd. by spot tests. Complexes of Al3+, Sc3+, Ga3+, and Zr4+ exhibited fluorescence in HOAc; detection limits are given. In Al or Sc complexes of 2-hydroxyl-1-naphthaldehyde benzoyl hydrazone, carbonyl group, hydroxyl group, and the N atom of the N:CH were involved in chelate formation.

IT **34334-88-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, in fluorescent detection of metal ions)

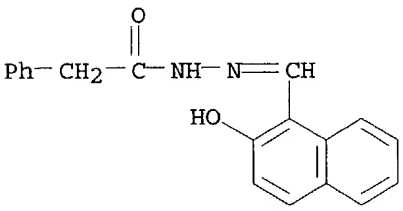
RN 34334-88-8 CAPLUS

CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:547470 CAPLUS
DOCUMENT NUMBER: 75:147470
TITLE: Studies on the hydrazone derivatives in fluorometric analysis. II. Fluorometric determination of aluminum
AUTHOR(S): Uno, Toyozo; Taniguchi, Hirokazu
CORPORATE SOURCE: Fac. Pharmacol., Kyoto Univ., Kyoto, Japan
SOURCE: Bunseki Kagaku (1971), 20(9), 1123-8
CODEN: BNSKAK; ISSN: 0525-1931
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
ED Entered STN: 12 May 1984
AB Al was detd. fluorometrically at 395 m.mu. (excitation) and 475 m.mu. (emission) as its chelate with 2-hydroxy-1-naphthaldehyde benzoylhydrazone (I) at pH 4.6, with an av. deviation of 0.84%. Beer's law was obeyed for 0.1-1.0 .mu.g/ml. Cu(II), Fe(II), Fe(III), Co(II), and Ni(II) interfere. The 2-hydroxy-1-naphthaldehyde acetyl, phenylacetyl, and isonicotinoyl hydrazones were also prepared and tested.
IT **34334-88-8**
RL: ANST (Analytical study)
(in detn., of aluminum)
RN 34334-88-8 CAPLUS
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 14 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:319377 USPATFULL
TITLE: Bactericidal antimicrobial methods and compositions for use in treating gram positive infections
INVENTOR(S): Markham, Penelope N., Oak Park, IL, UNITED STATES
Mulhearn, Debbie C., Wheaton, IL, UNITED STATES
Klyachko, Ekaterina A., Chicago, IL, UNITED STATES
Neyfakh, Alexander A., Chicago, IL, UNITED STATES
Crich, David, Chicago, IL, UNITED STATES
Jaber, Mohamed-Rami, Romeoville, IL, UNITED STATES
Johnson, Michael E., Winnetka, IL, UNITED STATES
PATENT ASSIGNEE(S): Influx, Inc., Chicago, IL (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003225126	A1	20031204	
APPLICATION INFO.:	US 2001-816761	A1	20010323	(9)

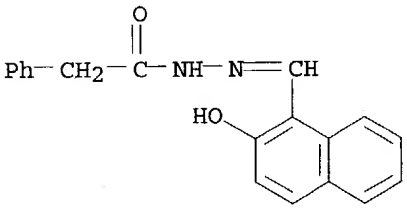
	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-191879P	20000323 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Steven L. Highlander, Fulbright & Jaworski L.L.P., Suite 2400, 600 Congress Ave., Austin, TX, 78701
NUMBER OF CLAIMS: 79

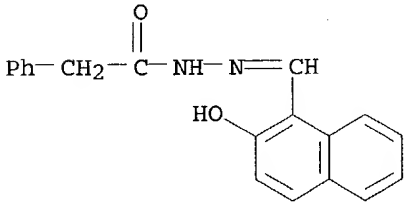
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 2540
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates generally to the field of bacteriology. More particularly, the present invention provides methods and compositions for increasing the effectiveness of existing antibacterial agents and methods of overcoming bacterial resistance. Specifically, the invention provides methods of enhancing the action of an antibacterial agent by use of an antibiotic potentiator. Compositions of antibiotic potentiators including an acyl hydrazide, an oxy amide, and an 8-hydroxy quinoline also are disclosed.

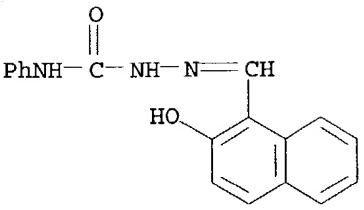
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **34334-88-8 34334-88-8D**, N-alkyl derivs.
118675-88-0 362512-05-8 362512-06-9
362512-07-0 362512-10-5
(bactericidal antimicrobial methods and compns. using acyl hydrazides, oxyamides, and 8-hydroxyquinolines as antibiotic potentiators for treatment of Gram-pos. infections)
RN 34334-88-8 USPATFULL
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 34334-88-8 USPATFULL
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 118675-88-0 USPATFULL
CN Hydrazinecarboxamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]-N-phenyl- (9CI) (CA INDEX NAME)



RN 362512-05-8 USPATFULL
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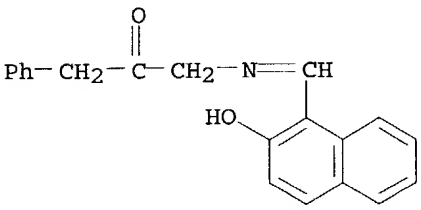

RN 362512-06-9 USPATFULL
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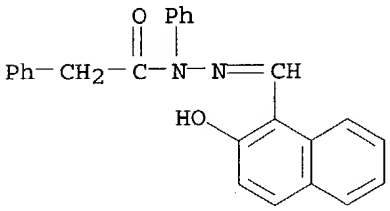
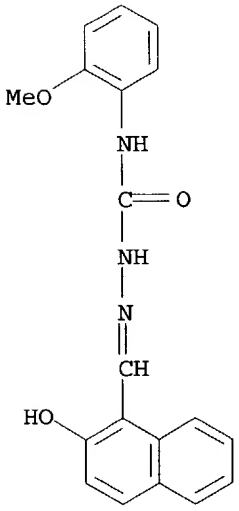
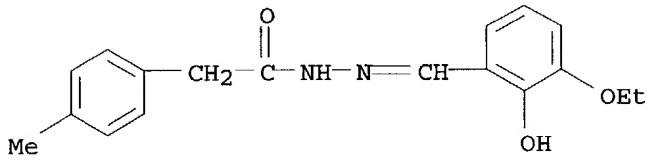


RN 362512-07-0 USPATFULL
CN Hydrazinecarboxamide, 2-[(2-hydroxy-1-naphthalenyl)methylene]-N-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 362512-10-5 USPATFULL
CN Benzeneacetic acid, 4-methyl-, [(3-ethoxy-2-hydroxyphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 15 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2002:192012 USPATFULL
TITLE: Adjuvant activity through modulation of animal and plant cell membrane transport
INVENTOR(S): Windsor, J. Brian, Austin, TX, UNITED STATES
Roux, Stan J., Austin, TX, UNITED STATES
Lloyd, Alan M., Austin, TX, UNITED STATES
PATENT ASSIGNEE(S): Board of Regents, The University of Texas System (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002103082	A1	20020801
APPLICATION INFO.:	US 2001-800327	A1	20010306 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-187819P	20000308 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: McDaniel & Associates, P.C., P.O. Box 2244, Austin, TX, 78768-2244
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2066
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

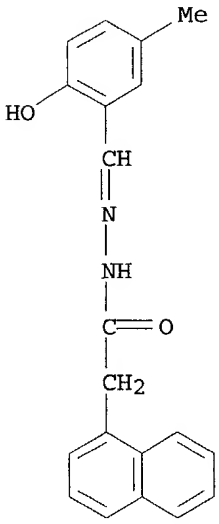
AB The present invention relates to the modulation of pesticidal and herbicidal activity by treatment of a membrane transport system in a cell. This entails modifying the extra-cellular phosphatases found in the membranes of these cells. By modifying the ATP gradient across the biological membrane of a target plant, bacteria, insect or mammalian cell via inhibiting one or more extra-cellular phosphatases, it is possible to alter the sensitivity to a pesticide or herbicide. In preferred embodiments, the chemical moieties of the invention act as adjuvants to enhance pesticidal activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **291536-82-8 291536-84-0**
(pesticide adjuvant acting by inhibition of extracellular phosphatases in membranes)

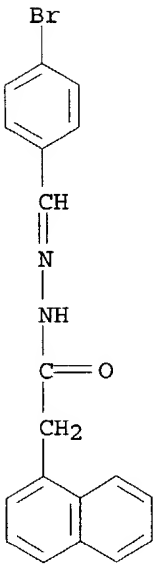
RN 291536-82-8 USPATFULL

CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 USPATFULL

CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 16 OF 17 USPATFULL on STN

ACCESSION NUMBER:	2002:149209 USPATFULL
TITLE:	Method for increasing the effectiveness of antiinfective
INVENTOR(S):	Windsor, J. Brian, Austin, TX, UNITED STATES Roux, Stan J., Austin, TX, UNITED STATES Lloyd, Alan M., Austin, TX, UNITED STATES
PATENT ASSIGNEE(S):	The University of Texas System (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077365	A1	20020620
APPLICATION INFO.:	US 2001-949268	A1	20010907 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-231088P	20000908 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	FULBRIGHT & JAWORSKI L.L.P., A REGISTERED LIMITED LIABILITY PARTNERSHIP, SUITE 2400, 600 CONGRESS AVENUE, AUSTIN, TX, 78701
NUMBER OF CLAIMS:	41
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	18 Drawing Page(s)
LINE COUNT:	1624

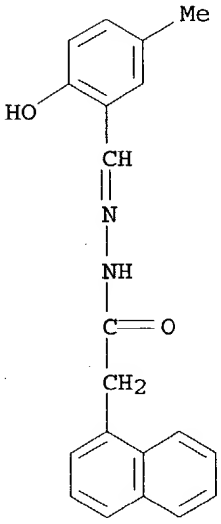
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods for decreasing the resistance of microbial strains to antiinfectives such an antibiotics and antifungals by altering the ATP gradient across biological membranes. The altering of the ATP gradient across biological membranes is achieved through the inhibition of ecto-phosphatase activity and/or ABC transporter molecule activity which may be useful to reduce resistance in bacteria and yeast to aid in the treatment of certain infections and disease and to lower the concentration of antiinfectives necessary to inhibit the growth of microbial strains.

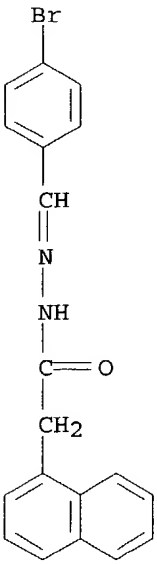
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **291536-82-8 291536-84-0**
(as apyrase inhibitor; method for increasing effectiveness of antiinfective agents by inhibiting ecto-phosphatase and/or ABC transporter activities)

RN 291536-82-8 USPATFULL
CN 1-Naphthaleneacetic acid, [(2-hydroxy-5-methylphenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



RN 291536-84-0 USPATFULL
CN 1-Naphthaleneacetic acid, [(4-bromophenyl)methylene]hydrazide (9CI) (CA INDEX NAME)



L27 ANSWER 17 OF 17 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2003:338397 BIOSIS
DOCUMENT NUMBER: PREV200300338397
TITLE: Bactericidal potentiators of bacteriostatic antibiotics.
AUTHOR(S): Klyachko, E. A. [Reprint Author]; Jaber, M. R. [Reprint Author]; Mulhearn, D. C. [Reprint Author]; Crich, D.; Johnson, M. E.; Neyfakh, A. A.; Markham, P. N. [Reprint Author]
CORPORATE SOURCE: Influx, Inc., Chicago, IL, USA
SOURCE: Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (2002) Vol. 42, pp. 199. print. Meeting Info.: 42nd Interscience Conference on Antimicrobial Agents and Chemotherapy. San Diego, CA, USA. September 27-30, 2002. American Society for Microbiology.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Jul 2003
Last Updated on STN: 22 Aug 2003

ABSTRACT:The screening of a chemical library has identified compounds with a novel activity: they confer bactericidal activity to bacteriostatic antibiotics. Although these compounds lack any antibacterial activity, in combination with bacteriostatic concentrations of erythromycin, chloramphenicol, tetracycline, linezolid, clindamycin or rifampin, they promote more than a thousand-fold decrease in the viability of S. aureus within 3 h. The most active compound, INF 401, lowers the minimal bactericidal concentration of these antibiotics by a factor of at least 16 so that the antibiotic exhibits cidal activity even at their MIC. Additionally, INF 401 reduces the minimal active concentration of rifampin and clindamycin against S. aureus biofilms in vitro by at least 64 fold. The mechanism of action of INF 401 has been established and appears unique. It causes an accumulation of iron within cells and in combination with an antibiotic promotes the rapid degradation of DNA. Normally bacteria tolerate INF 401 by inducing the biosynthesis of proteins involved in the oxidative stress response, such as AhpC. However, in the presence of an antibiotic inhibitor of protein synthesis, the stress response is inhibited and bacteria die. Preliminary experiments demonstrate that mice tolerate INF 401 at doses up to 30 mg/kg IV which translates into concentrations significantly exceeding the active concentration of this compound in vitro. A QSAR-based chemical improvement of INF 401 has led to the identification of promising lead compounds. The developed potentiator, in combination with one of several bacteriostatic antibiotics, could be useful in treating endocarditis, osteomyelitis, infections in immunocompromised patients, infections involving biofilms and in other situations where resistance to existing bactericidal antibiotics limits treatment options.

CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Pathology - Therapy 12512
Pharmacology - General 22002
Pharmacology - Clinical pharmacology 22005
Physiology and biochemistry of bacteria 31000
Medical and clinical microbiology - Bacteriology 36002
Chemotherapy - General, methods and metabolism 38502
Chemotherapy - Antibacterial agents 38504

INDEX TERMS: Major Concepts
Pharmacology

INDEX TERMS: Diseases
bacterial infection: bacterial disease, drug therapy

Bacterial Infections (MeSH)

INDEX TERMS: Chemicals & Biochemicals
DNA: degradation; INF 401: biological activities/effects, pharmacodynamics, pharmaceutical; antibiotics: bactericidal potentiators, bacteriostatic; chloramphenicol: antibacterial-drug, antiinfective-drug, enzyme inhibitor-drug; clindamycin: antibacterial-drug, antiinfective-drug; erythromycin: antibacterial-drug, antiinfective-drug, enzyme inhibitor-drug; linezolid: antibacterial-drug, antiinfective-drug; proteins: biosynthesis; rifampin: antibacterial-drug, antiinfective-drug, enzyme inhibitor-drug; tetracycline: antibacterial-drug, antiinfective-drug, enzyme inhibitor-drug

INDEX TERMS: Methods & Equipment
antimicrobial chemotherapy: clinical techniques, therapeutic and prophylactic techniques

INDEX TERMS: Miscellaneous Descriptors
MIC [minimum inhibitory concentration]; bacterial viability: reduction; bacteriostasis; drug discovery; drug targets; quantitative structure-activity relationships

ORGANISM: Classifier
Bacteria 05000
Super Taxa
Microorganisms
Organism Name
bacteria (common)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common)
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGANISM: Classifier
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Super Taxa
Gram-Positive Cocci; Eubacteria; Bacteria; Microorganisms
Organism Name
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Taxa Notes
Bacteria, Eubacteria, Microorganisms

REGISTRY NUMBER: **34334-88-8** (INF 401)
56-75-7 (chloramphenicol)
18323-44-9 (clindamycin)
114-07-8 (erythromycin)
165800-03-3 (linezolid)
13292-46-1 (rifampin)
60-54-8 (tetracycline)

=> fil reg; s 34334-88-8
FILE 'REGISTRY' ENTERED AT 11:38:54 ON 26 APR 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 APR 2004 HIGHEST RN 676578-75-9
DICTIONARY FILE UPDATES: 23 APR 2004 HIGHEST RN 676578-75-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

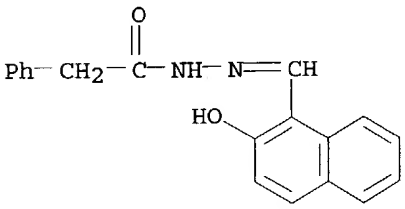
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

L28 1 34334-88-8
(34334-88-8/RN)

=> d ide

L28 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN **34334-88-8** REGISTRY
CN Benzeneacetic acid, [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acetic acid, phenyl-, [(2-hydroxy-1-naphthyl)methylene]hydrazide (8CI)
OTHER NAMES:
CN 2-Hydroxy-1-naphthaldehyde phenylacetic acid hydrazone
CN INF 401
FS 3D CONCORD
MF C19 H16 N2 O2
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CHEMCATS, GMELIN*, SYNTHLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FILE 'REGISTRY' ENTERED AT 11:48:48 ON 26 APR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 APR 2004  HIGHEST RN 676578-75-9
DICTIONARY FILE UPDATES:  23 APR 2004  HIGHEST RN 676578-75-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html


L33                 STR
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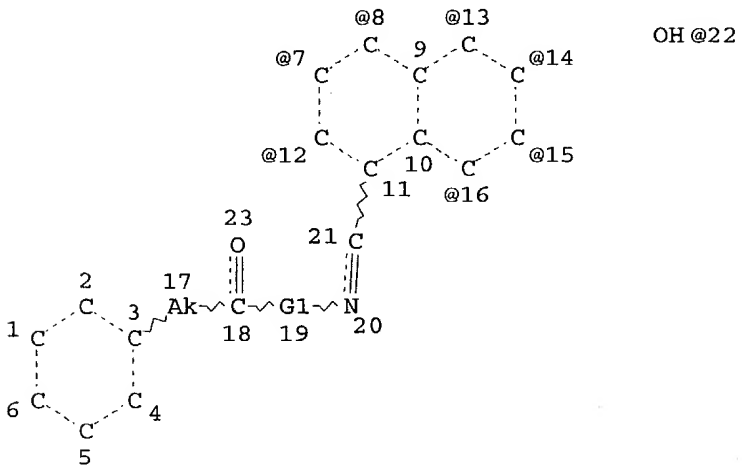


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DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS  23

STEREO ATTRIBUTES: NONE
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'USPATFULL' ENTERED AT 11:48:58 ON 26 APR 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 11:48:58 ON 26 APR 2004
COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'TOXCENTER' ENTERED AT 11:48:58 ON 26 APR 2004
COPYRIGHT (C) 2004 ACS

L40             9 L35

=> s l40 not l26
L41             1 L40 NOT L26

=> d ibib ed abs hitstr l41

L41 ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1989:575281  CAPLUS
DOCUMENT NUMBER:          111:175281
TITLE:                    Thermal stabilization of photochemically crosslinked
                          materials based on polyethylene with phenol-type
                          antioxidants
AUTHOR(S):                Zamotaev, P. V.; Mityukhin, O. P.; Stvel'tsova, Z. O.;
                          Glushkova, L. V.; Iofis, L. I.
CORPORATE SOURCE:         USSR
SOURCE:                   Plasticheskie Massy (1989), (4), 56-8
                          CODEN: PLMSAI; ISSN: 0554-2901
DOCUMENT TYPE:            Journal
LANGUAGE:                 Russian
ED   Entered STN:  10 Nov 1989
AB   Anticorrosive, elec. insulating, and packaging materials were prepd. from
     low-d. polyethylene (I) by UV-photochem. crosslinking in the presence of
     xanthone and 2-ethylanthraquinone initiators and thermal stabilization
     with 0.1-0.5% phenolic antioxidants.  The most effective antioxidant was
     N-[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyl]ethylenediamine, which
     considerably increased the gel-fraction content in photochem. crosslinked
     I-based composites.  The consumption of antioxidants during photochem.
     crosslinking was caused by interaction with alkyl and peroxide radicals.
IT   123196-27-0, F 102
     RL: USES (Uses)
        (antioxidants, thermal stabilization with, of photochem. crosslinked
        low-d. polyethylene)
RN   123196-27-0  CAPLUS
CN   Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,
     [(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI)  (CA INDEX NAME)
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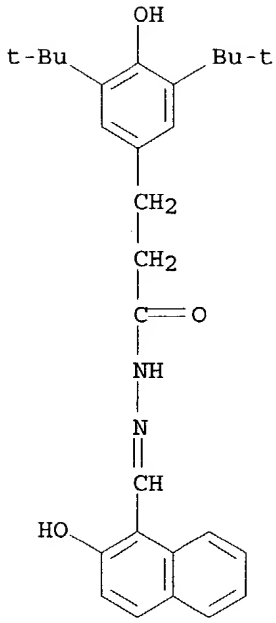


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JON227CA3/A      TEMP         5 ANSWERS IN FILE CAPLUS
JON227CA4/A      TEMP         1 ANSWER IN FILE CAPLUS
JON227US1/A      TEMP         2 ANSWERS IN FILE USPATFULL
JON227US2/A      TEMP         1 ANSWER IN FILE USPATFULL
JON227US3/A      TEMP         1 ANSWER IN FILE USPATFULL
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KRI148SUB/A      TEMP         308 ANSWERS IN FILE REGISTRY
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SPI611FAM/A      TEMP         26 ANSWERS IN FILE REGISTRY


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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    0.00      -9.70

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